

What is claimed is:

1. A method for detecting the alignment of document in an automatic document feeder, comprising the steps of:

5 Step A: providing an optical scanner having an automatic document feeder and a document, the automatic document feeder having a colored pattern layer in corresponding to a scanning window of the optical scanner, the document has at least one side edge, and when the document is fed into the automatic document feeder, the side edge is just located between the scanning window and the colored pattern layer;

10 Step B: actuating the automatic document feeder to feed in the document, a first image retrieval is made for the document placed on the scanning window;

 Step C: an appropriate length of the document is fed in;

15 Step D: a second image retrieval is made for the document placed on the scanning window; and

 Step E: a slant value is calculated out from the result of comparing the first image retrieval and the second image retrieval.

20 2. The method for detecting the alignment of document in an automatic document feeder of claim 1, wherein the color of the colored pattern layer in step A is different from that of the document.

 3. The method for detecting the alignment of document in an automatic document feeder of claim 1, wherein the side edge in step A is parallel to the feeding direction of the document fed into the automatic document feeder.

25 4. The method for detecting the alignment of document in an automatic document feeder of claim 1, wherein a first distance of the first image retrieval is a distance retrieved from the side edge to a reference point positioned in the colored pattern layer.

30 5. The method for detecting the alignment of document in an automatic document feeder of claim 4, wherein a second distance of the second image retrieval is a distance retrieved from the side edge to the

reference point after an appropriate length is fed in.

6.The method for detecting the alignment of document in an automatic document feeder of claim 4, wherein the reference point is positioned on a scan line of the scanning window.

5 7.The method for detecting the alignment of document in an automatic document feeder of claim 5, wherein the slant value in step E is a ratio for the difference value of the first distance and the second distance versus the appropriate length.

10 8.The method for detecting the alignment of document in an automatic document feeder of claim 7, wherein the slant value in step E is calculated by an electronic calculation device.

9.The method for detecting the alignment of document in an automatic document feeder of claim 8, wherein the electronic calculation device is a software calculation program.

15 10.The method for detecting the alignment of document in an automatic document feeder of claim 8, wherein the electronic calculation device is a calculator in a computer executing scanning job.

20 11.The method for detecting the alignment of document in an automatic document feeder of claim 1, wherein after the step E, comprising the steps of:

Step F: comparing the slant value with a preset value.

25 12.The method for detecting the alignment of document in an automatic document feeder of claim 11, wherein the preset value in step F is a value that is tested and provided for the document appropriately fed into the scanning area.

13.The method for detecting the alignment of document in an automatic document feeder of claim 11, wherein after the step F, comprising the steps of:

30 Step G: if the slant value is smaller than the preset value, scanning the document is begun.

14.The method for detecting the alignment of document in an

automatic document feeder of claim 11, wherein after the step F, comprising the steps of:

Step H: if the slant value is larger than the preset value, scanning the document is stopped.

- 5 15.The method for detecting the alignment of document in an automatic document feeder of claim 14, wherein after the step H, comprising the steps of:

Step H1: taking out the document, and repeating step B through step E.

- 10 16.The method for detecting the alignment of document in an automatic document feeder of claim 15, wherein the step of taking out the document in step H1 is made by manual method.

- 15 17.The method for detecting the alignment of document in an automatic document feeder of claim 13, wherein after the step H, comprising the steps of:

Step H2: setting off an alarm.